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14. ABSTRACT

The strategic management issue researched is how to improve the NMMC's total joint replacement program. This procedure was initially recognized as an area of concern by the organization due to its high cost and predictions of a substantial national increase in volume over the next several years. The hospital intends to strategically position itself to increase quality outcomes, volume, and cost effectiveness relative to total joint replacements. The evaluation of the external environment, service area competitor analysis and internal environment demonstrates the need for the hospital to pursue both enhancement and penetration strategies. Service enhancement will be achieved through the adoption of a new methodology to improve its operations and services through increased quality and efficiency. This new approach is often referred to as the wellness approach and is a unique, innovative way of patient education and treatment. The concept places an increased focus on pre-surgical education, family involvement and group interactions than most traditional treatment approaches.

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A Strategic Management Plan to Adopt a New Methodology for Treating Total Joint Replacement Patients

Presented to Lieutenant Colonel Robert Griffith

Bradley D. Gann
LTjg, United States Navy

In partial fulfillment of the requirements for
Healthcare Administration Residency

Fort Sam Houston, TX
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Finally, I extend my most sincere gratitude to the instructors at the Army Baylor Program. The instructors at this program are both dedicated to the students and to the betterment of healthcare as a whole. It is obvious that their mission is to improve the healthcare industry by providing the necessary tools to future health care leaders, one class at a time.

Executive Summary

The specific strategic management issue researched is how to improve the facility's total joint replacement program. This procedure was initially recognized as an area of concern by the organization due to its high cost and predictions of a substantial national increase in volume over the next several years. The hospital intends to strategically position itself to increase quality outcomes, volume, and cost effectiveness relative to total joint replacements. The evaluation of the external environment, service area competitor analysis and internal environment demonstrates the need for the hospital to pursue both enhancement and penetration strategies. Service enhancement will be achieved through the adoption of a new methodology to improve its operations and services through increased quality and efficiency. This new approach is often referred to as the wellness approach and is a unique, innovative way of patient education and treatment. It emphasizes the mindset that a patient going through this procedure is not sick, but a healthy individual choosing to have a procedure that will improve their quality of life through increased mobility and decreased pain. The concept places an increased focus on pre-surgical education, family involvement and group interactions than most traditional treatment approaches. Market penetration will be accomplished by community seminars, increased advertisement and word of mouth by highly satisfied patients. The initial implementation of this process will require establishing procedures to capture the outcomes, financial and patient satisfaction data. This data will then be utilized to help evolve the program to best meet the needs of its stakeholders.

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Introduction

Organizational Overview

North Mississippi Medical Center (NMMC) is a 650-bed regional referral center in Tupelo, MS and is a Level II trauma center (Koch, 2006). It offers a full array of capabilities, including an Emergency Department, a complete surgical service suite, critical care unit and diagnostic imaging. The hospital is committed to continuously meet federal and state guidelines and standards in its treatment of trauma patients.

NMMC is Mississippi's largest hospital and America's largest non-metropolitan hospital. The hospital provides care to more than 650,000 people in over 24 counties (Koch, 2006). NMMC's Home Health Agency provides complex and extremely high levels of technical care for patients in 17 counties. The hospital's medical staff provides patient care for over 40 specialties (Koch, 2006). Additionally, it provides centers of excellence in cancer treatment and research, cardiac surgery, cardiology, chemical dependency, kidney, neonatal programs, neurology, neurosurgery, pulmonology, and rehabilitation (NMMC Home Page, 2007).

NMMC has received numerous awards and recognitions relative to its quality of care, cost efficiency, access of care and initiatives for constant improvement in every facet of business and healthcare. The hospital participates in various levels of industry analysis in acquiring and providing data for overall healthcare improvement within its own facilities and to assist others. These acts of transparency have resulted in numerous self improvements as well as recognition from outside agencies.

The hospital's journey toward excellence in quality can be best illustrated by its earning of a Baldrige National Quality Program site visit in 2005 and the Baldrige National Quality Award in 2006. There were only seven site visits awarded within the Healthcare industry in 2005, with only one award presented (Baldrige Website, n.d.). Baldrige only awarded six site visits in 2006; the NMMC was the only hospital to earn the award in 2006 (Baldrige Website, n.d.).

Additionally, the American Hospital Association presented NMMC with the "McKesson Quest for Quality Prize®" in 2005. The hospital was named as one of the "Top 100 Hospitals in Performance Improvement" from 2004 through 2006 by Solucient (NMMC Awards Page, n.d.).

The American Journal of Medicine has recognized NMMC's "hospitalist program" for providing cost-efficient care to its inpatients (NMMC Awards Page, n.d.). The "hospitalist program" began in 1997 and employs a team of internal medicine physicians who provide continuous care to inpatients who do not have a primary care physician. The hospital was awarded the 2006 "Nightingale Award" as Mississippi hospital of the year in the greater than 100 bed category (NMMC Awards Page, 2007).

The hospital has also received numerous recognitions for its healthcare information systems and practices. It was honored as "Health Care's Most Wired" from 2001 through 2006, which in great part is attributed to their use of electronic health records for over 20 years, and their ability to improve access of care by providing local physicians with the ability to review accurate patient histories and other pertinent medical information (NMMC Awards Page, n.d.). This has contributed to the facility's recognition by Verispan as one of the "Top 100 integrated Healthcare Networks" in 2002 through 2006 (NMMC Awards Page, n.d.). Hospitals and Health Networks named NMMC in the "Top 100 Most Wireless" for the last three years (NMMC Awards Page, 2007).

NMMC's Mission and Vision (NMMC Mission and Vision, 2007):

Mission - Why We Exist

To continuously improve the health of the people of NMMC's region.

Vision - What We Want To Be

The provider of the best patient centered care and health services in America.

Vision and Innovation are woven into the very fabric of NMMC organizational culture. The Mission, Vision and Organizational Values are the evolutionary result of an organization created by people of vision in the community in the early 1930s. NMMC and its leadership are dedicated to continuing that tradition and accomplishment set by community leaders in Tupelo and surrounding communities. NMMC reaffirms and refreshes the intentions of the community's founding leaders to address current needs and anticipate the future state of health care.

This is accomplished through a carefully crafted and continuously refined process of strategic planning that correlates current and future health care needs with the current capability and the future promise of the art and science of medicine. The Mission, Vision and Organizational Values are not just words but messages that inspire a diverse workforce to achieve their full potential.

The Board of Directors and senior leadership set the current Mission statement in 1994 to reflect the growing refusal to accept the pervasiveness of disease, which continued to debilitate this region. In 2001, this process led to the Values statement based on input from employees, physicians and the community. Since 1996, as a result of NMMC's work with the Baldrige

criteria, it has set its sights on organizational performance that far exceeds merely the acceptable.

The North Mississippi Medical Center's Emergency and Surgical Services Line

The North Mississippi Medical Center's Emergency and Surgical Services Line is a multidisciplinary division that employees 31 certified registered nurse anesthetists, 45 operating room nurses, 36 operating room technologists, 17 support staff and works with numerous local physicians and anesthesiologists (Koch, 2006). The facility consists of 22 functioning operating rooms and performs over 14,000 surgical cases annually.

Surgical Services Line's Orthopedic Section

Orthopedics is a section within the Emergency and Surgical Services Line. The Orthopedic Section has dedicated staff that includes: four operating room nurses, seven operating room technologists, and works with nine local physicians. The section utilizes Anesthesia and support staff from the Surgical Services Line; however, they are not dedicated solely to the Orthopedic Section. This section performs over 2,400 surgical cases annually.

Problem Statement

The specific strategic management issue researched is total joint replacement (TJR). The costs versus revenues associated with total joint procedures have been recognized and discussed routinely as an issue at an organizational level within the facility. Total joint replacement has been listed for the last two years on the organizational "Top 20 Variance list, 2006." The Variance list specifically addresses the issue at a Medicare level; however it is an issue across every payer mix.

Total joint replacements are commonly identified by three Diagnosis Related Groups (DRGs). Until the end of 2005 the primary DRG for TJR was 209; it is now broken down into DRG 544 Major joint replacement or reattachment of lower extremity and DRG 545 for Revision of hip or knee replacement. For the purposes of this analysis TJR is considered both DRG 544 and 545. The "Top 20 Variance list" illustrated that the costs exceeded revenues by $838.25 on average per Medicare case, which accounts for approximately 73% of total joint replacement procedures ([Payer mix by DRG], 2006).

The Surgical Service's scheduling tool and the data mining system shows that the hospital performs approximately 600 procedures a year. The annual volume data when compared to the average negative revenue generated per case suggests a loss of $502,950 annually. Many experts predict that the number of patients requiring total joint replacement will increase by 63% by the year 2010, which at the current negative revenue rate would mean that the hospital is positioned to annually lose approximately $819,808 by year 2010 (Friesen, 2006). The issue is further compounded by the high number of local physicians who desire to increase their regional market share of this procedure.

NMMC utilizes Press Ganey as its primary means of evaluating patient satisfaction. Press Ganey is a highly regarded third party consulting firm that provides data capture and measurement tools for evaluating and improving patient satisfaction (Koch, 2006). The measurement tools provide several filters that allow hospitals to drill down to specific units, shifts and evaluate their individual scores as well as the organization's scores as a whole. However, it is currently not possible to segregate the satisfaction scores by procedure type, which precludes the hospital from establishing an individual satisfaction score for TJR patients.

The hospital has several issues that will require addressing in regards to establishing measures and quality indicators in relation to patient outcomes. The Surgical Service Line has a mechanism in place that collects data from within the hospital to measure infection rates.

However, any infection that occurs post discharge is likely to be treated off-site by either the patient's primary treatment physician or orthopedic surgeon; this off-site data is not captured by the NMMC. Patients who undergo TJR procedures are discharged once surgeon-specific discharge criteria are met, however, the hospital does not currently gather the data to record such individual quality outcome indicators such as range of motion at discharge or the number of steps the patient can ambulate unassisted. These indicators are extremely important to not only assure we have quality outcomes but to measure the variance of outcomes when different treatment methods are trialed.

Purpose:

The purpose of this plan is to strategically position the NMMC's total joint replacement program to increase quality outcomes (i.e. range of motion, increased mobility at discharge and decreased infection rates), volume, and cost effectiveness relative to total joint replacements.

Situational Analysis

External Environment

The general environment of the NMMC's primary and secondary catchments areas encompasses 24 counties in Northeast Mississippi and Northwest Alabama with a patient population of over 700,000 (Koch, 2006). NMMC faces several geographic obstacles. The primary two are its relative geographic isolation and that its large catchment area has a primary transportation system of 2-lane roads (Koch, 2006).

The legal and business environment of NMMC is that of a highly regulated facility that complies with or exceeds federal, state and local regulations. These regulations encompass patient care and safety, employee safety, equal employment opportunities and environmental and financial regulations. Mississippi is a certificate of need state (CON). Some of its most significant regulatory agencies are: Centers for Medicare and Medicaid Services (CMS), Occupational Safety and Health Administration (OSHA), Centers for Disease Control & Prevention (CDC), American Disabilities Act (ADA), Family Medical Leave Act (FMLA), Mississippi Department of Health (MDOH), Mississippi Department of Environmental Quality (MDEQ), American College of Radiology (ACR), American College of Surgeons (ACS), and Joint Commission on the Accreditation of Healthcare (JCAHO) (Koch, 2006). There are also numerous business partnerships with local physician groups.

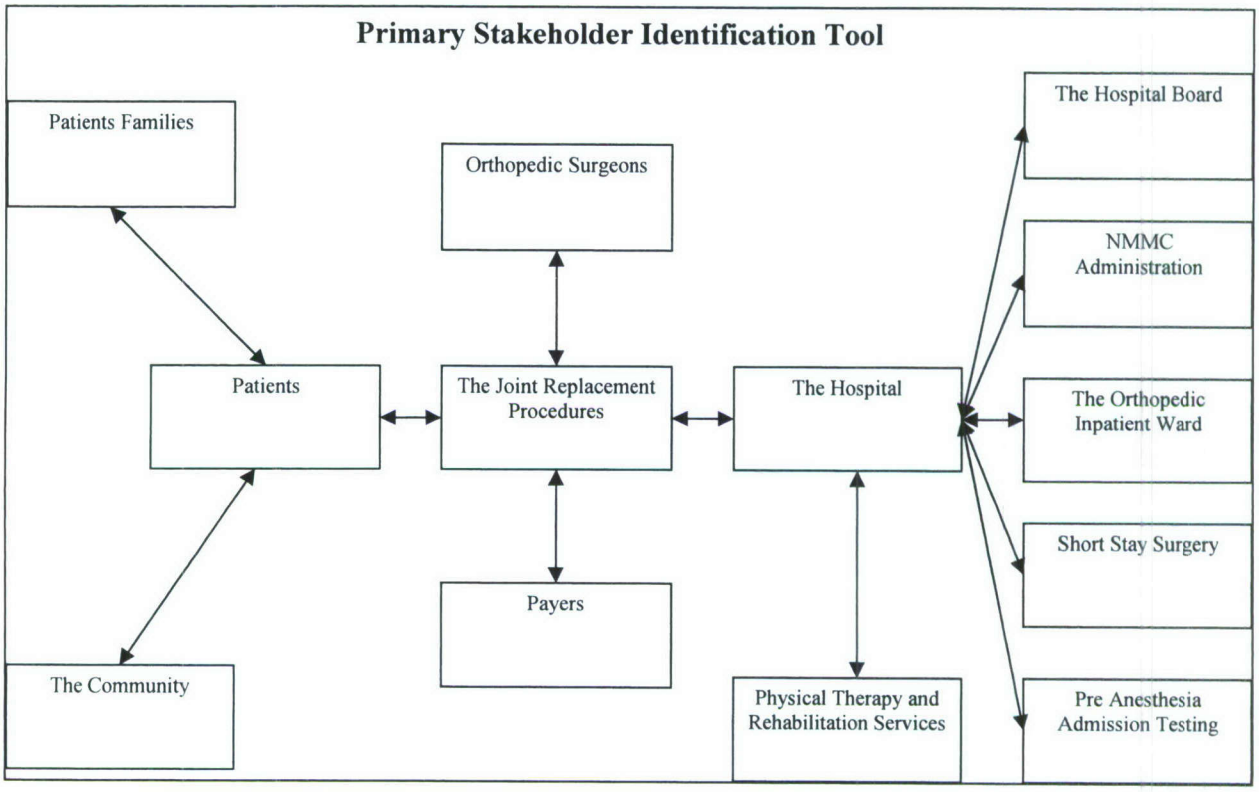
The NMMC has developed strategies and networks for the purpose of recruitment with 219 academic institutions across America with educational contracts. NMMC provides the academic institutions with training sites, clinical rotations, and mentoring programs for students and residents. This symbiotic relationship is crucial to both the hospital and academic institutions. Currently the NMMC maintains no religious affiliations. However it does maintain close ties with several research organizations and foundations. These include: the Professional Research Consultants Survey Company (PRC), the Social Sciences Research Center (SSRC), Solucient,

and Press Ganey and Associates (PGA). Solucient is the largest healthcare comparative database in the United States and provides clinical, operational, financial, marketing data and benchmarks. Press Ganey and Associates (PGA) are the United State's largest comparative database of patient satisfaction (Koch, 2006).

NMMC employees 3,875 staff members, which make it the largest employer in its service area and the second largest private employer in the state (Koch, 2006). NMMC has no current unionization and minimizes its utilization of contract workers. Approximately 81% of NMMC's staff is full time employees (Koch, 2006). The hospital also grants privileges to over 275 physicians, over 30 of which are actually employed by the hospital (Koch, 2006). The hospital also utilizes Physician Support Representatives, an internal group that conducts annual physician surveys to identify areas of potential improvement, and works with the hospital executive management to make improvements. The physician and the hospital form an operational and strategic partnership. Physicians take a very active role in the decision processes at NMMC and the administration works to ensure strong physician representation at the board level (Koch, 2006).

There are also numerous sources of payers to the hospital. These sources include but are not limited to: Medicare, Medicaid, Blue Cross/Blue Shield, Acclaim (the hospitals privately owned insurance company), the patients who self pay, and numerous local businesses. In addition to the patients, staff, physicians and payers listed above, there are numerous other key stakeholders that must be recognized. These groups include: patient's families, major suppliers, and the local community. A visual representation of the key stakeholders of this project can be seen on the primary stakeholder identification tool below in Table 1.

Table 1



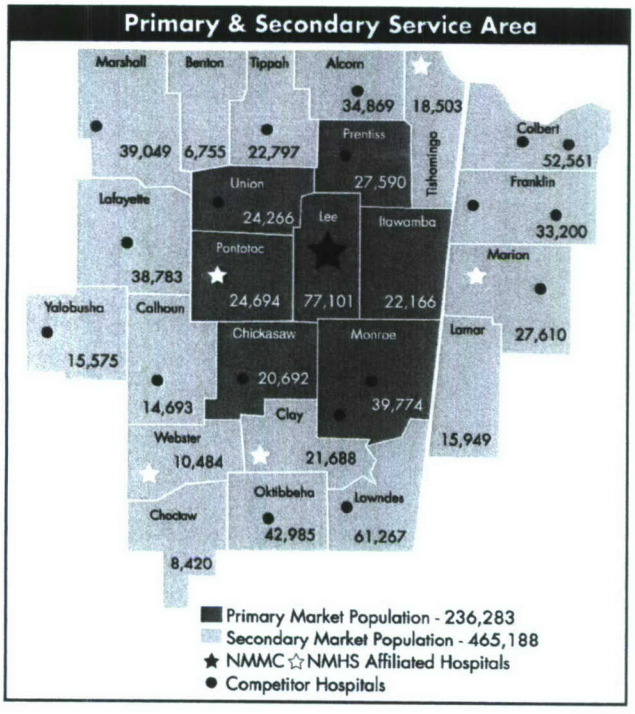
Service area competitor analysis for NMMC

The service category that is being addressed includes all aspects of the treatment of patients that require a total joint replacement or revision for either the hip or knee. There are many treatment models that are used nationally to deliver this care. Several treatment models utilize limited and non-standardized departments that provide the individual segments of this care. The complete provision of care as it relates to total joint replacement includes: perioperative education, pre-admissions testing, hospital admissions, surgical treatment, postoperative care, physical therapy rehabilitation, and follow-up post discharge. The model that the hospital is attempting to evaluate and incorporate will combine all these areas into a collaborative effort with high degrees of communication and standardization.

The service area encompasses 24 counties in Northeast Mississippi and Northwest Alabama with a patient population of over 700,000 (Koch, 2006). This service area is divided into a

primary and secondary catchment area and can be seen below as illustrated by Solucient (MPP) in 2005.

Figure 1



In evaluating the service area's general profile there were several limitations. First, this service area requires a high degree of competitive posturing attributable to its relative geographic isolation with a local (Tupelo city) population of approximately 35,000 (Koch, 2006). Mississippi's residents overall health status is among the worst in the nation and based on preliminary 2003 data, Mississippi had the highest age-adjusted mortality rate in the U.S. (Koch, 2006). The state also had a 2004 obesity rate of 27.6%, a tobacco use rate of 21.6%, and a moderate physical activity rate of only 24.5% (MSU, 2004). "The nearest hospitals of comparable size, and offering a comparable range of services, are located in urban locations at least 100 miles away in: Memphis, TN., Birmingham, Al., and Jackson, MS" (Koch, 2006). NMMC also faces strategic challenges with shortages of health care providers (Koch, 2006).

The service area's socioeconomic status also illustrates issues that need to be considered. The service area has a high percentage of economically challenged and uninsured, resulting in a significant amount of charity care (Koch, 2006). NMMC provided more than $58 million in 2005 for charity care (Koch, 2006). The hospital experiences a considerable bad debt load that reached over $39 million in 2005 (Koch, 2006). The 2005 median population adjusted household income in this catchment area was $34,410 with estimations of $38,235 in 2010. These data were gained through Solucient MPP and may be viewed by county in Appendix A.

When conducting a structural analysis, Michael Porter's five forces model is a useful tool in establishing the competitive nature within an industry. The five forces are threat of new entrant, rivalry among existing organizations, threat of substitutions, bargaining power of the customer and bargaining power of the supplier. These forces will provide useful insight into the current environment and also help to identify future opportunities and challenges (Swayne, 2006).

The first force is the threat of new entrants. The threat of new entrants is low. This is based on the value of brand recognition associated with NMMC within this geographic region. The existing organization possesses a significant degree of economies of scale and scope. There are also rigorous regulatory restraints within this industry to include a CON, which would be required to build another facility within the local area to offer the same services. However, there is no considerable product or service differentiation with NMMC's current practice of total joint replacement and those of its closest competitors.

The rivalry associated within the total joint replacement services is high within this market segment. The hospital does have significant geographical isolation, with no other comparable hospital within 100 miles (Koch, 2006). However, the potential impact of rivalry is what makes this force a high threat. NMMC needs to maintain its current market share to obtain fiduciary feasibility within this service. This may be seen by other hospital organizations as a strategic opportunity.

The next force is the threat of substitutes and could be identified as moderate in this specific market segment. There are currently no geographically close competitors in this market that can provide similar products. Traveling to other facilities is a barrier due to the multiple visits needed to complete the course of care for a total joint replacement. However, if the out-of-area facilities develop a total joint replacement program with greater (factual or perceived) patient satisfaction, outcomes, and cost savings the NMMC will risk losing significant market share. This would also be contingent on the other hospital's degree of competitive marketing.

Customer bargaining power is medium in this market segment. The other healthcare systems that can offer these services will do so at an increased cost to the patient in terms of travel time and inconvenience. However, switching costs are low since the physicians are able to refer to other facilities at the patient's request.

Supplier bargaining power is also medium within this market segment. The fact that there are few suppliers in this market segment adds to the supplier power. Cost variation however detracts from the supplier power by making them unable to pursue a low or set price marketing strategy. Most suppliers do not dictate which brand implant a physician may use. This flexibility with implant utilization can be costly to the hospital. The physicians, who are not employees of the hospital, are often marketed to directly by the implant manufacturers, which decrease the hospitals' ability to standardize this product.

The competitor analysis that was conducted by the joint replacement committee included hiring of a professional consultant and conducting three sites visits to help determine best practices. The consultant recommended that one of the site visits be conducted at the joint replacement center at Bergen Mercy Medical Center. The Huntsville Hospital's Joint Camp in Alabama was the second site selected. The third site visit was to St. Mary's Joint Replacement Center in Richmond Virginia, which was suggested by one of the hospitals implant vendors. Although these sites are not local competitors, it was felt that the sites offered models of the best practices and were an example of the service that local competitors could also adopt to gain market share.

All three of these sites offer a unique approach to the treatment of joint replacement procedures that the NMMC should emulate. Their approaches differ by reinforcing the patient's self reliance and camaraderie with the other joint replacement patients. They also offer an increase in pre-surgical education and more amenities. Many of these amenities serve to make the patients feel like they are in a hotel type atmosphere and not a hospital facility. Two of the sites have group therapy sessions and provide the patients with a gourmet meal to celebrate the completion of their inpatient stay. One of the sites has been successful in convincing all the physicians to standardize their order set, which gives the nurses a greater sense of efficiency minimizes treatment errors and oversights.

Competitor analysis within the local area was limited due to a lack of published information regarding actual practices utilized at each facility and the general competitive environment. The NMMC as a part of Solucient group was able to acquire the volume data of other local participating hospitals. Healthgrades web site also served as a source of ratings for this specialty service. Healthgrades rating are becoming increasingly important as it is beginning to gain recognition by patients as a means to evaluate places for their treatment. The final two resources used in the competitor analysis were the hospital's home pages on the internet and a web site

called UCompare Health Care, which provided useful information as it relates to certified bed capacity. The strategic grouping maps shown below in Tables 2 and 3 illustrate that while the NMMC's joint replacement programs were rated "as expected" with an average of three stars, four of the six local competitors had higher "Healthgrades" ratings (see Appendix B for more details). Table 2 also indicates that this rating does not draw a parallel to bed capacity. Although there are limitations to the data, Table 3 still shows that there is not a parallel to "Healthgrades" ratings and local procedures volume either. The NMMC's volume was greater than the combined volume of its two higher scoring competitors.

Table 2

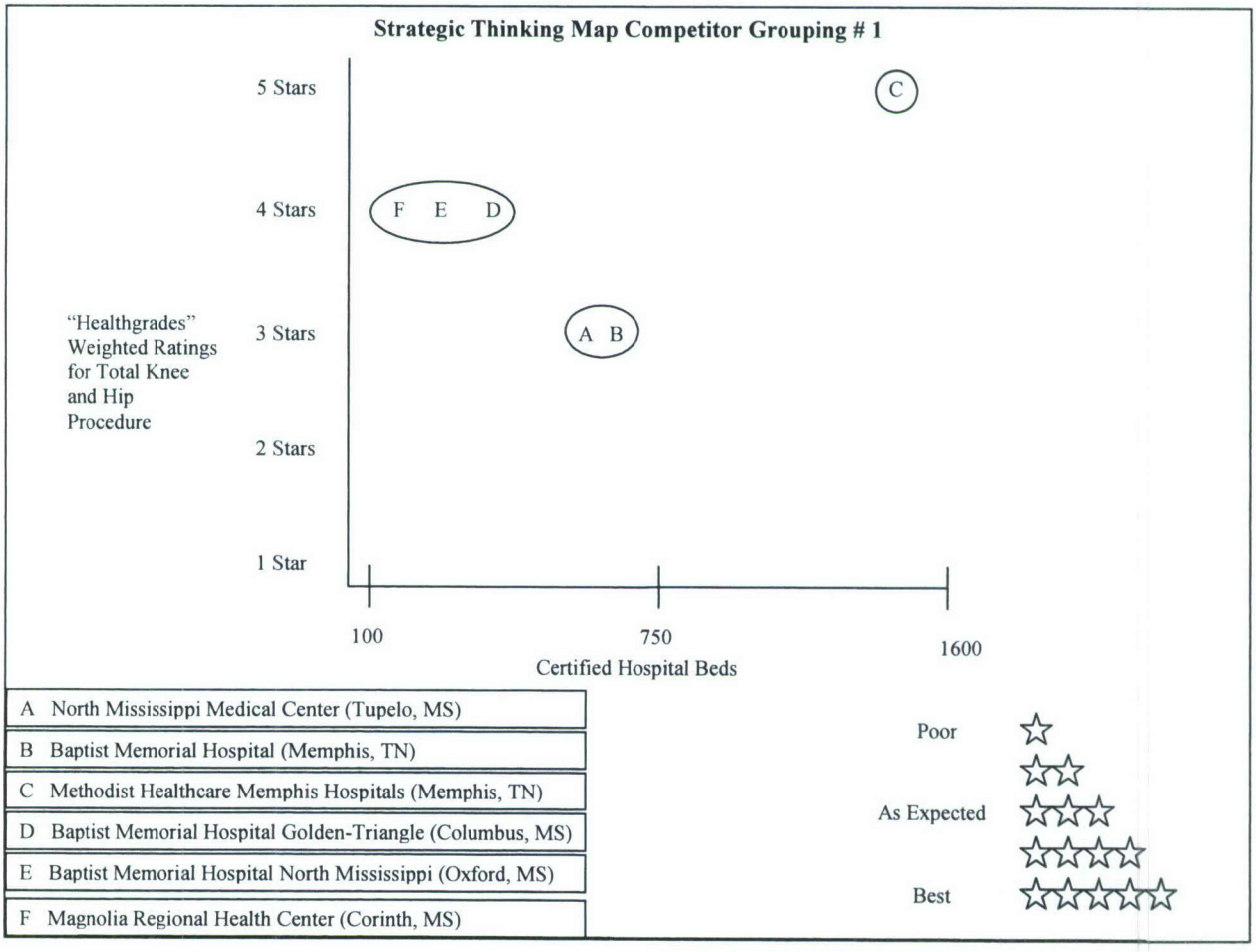
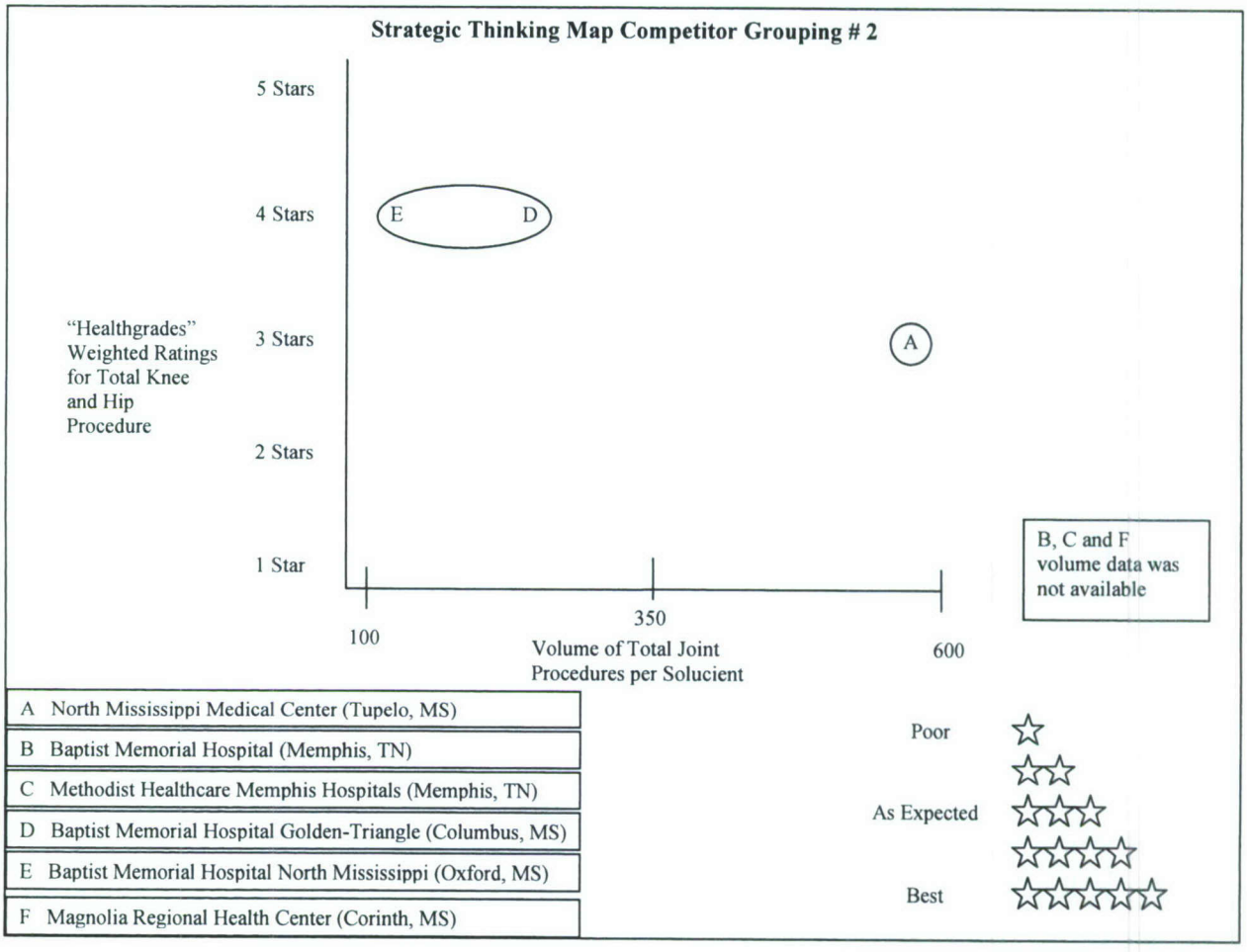


Table 3



Internal analysis

The internal analysis of the hospital can be broken down into four sections as they relate to the total joint replacement program and the NMMC. These sections are: strengths, weaknesses, opportunities, and threats. These four sections are useful in outlining what the organization is doing well, what it needs to improve upon and what it should potentially anticipate in the future.

The NMMC has several strengths that may act as competitive advantages. The primary set of strengths that the hospital has is that of its staff's culture. The importance and need to evaluate the processes involved in total joint replacements was established by an internal organizational report that showed that total joint replacement was one of the procedures in the NMMC's "Top 20 Variance List". The support of the current executive administration would be necessary in the

decision and ability to make a designated unit for the total joint replacement patients. The facility has the capabilities to allocate one wing of the current Orthopedic/Neurology floor to be isolated for the inpatients stays related to these procedures. This would allow for the hospital to give the unit a unique feel and appearance.

There are two other considerable strengths for this facility. The first is the Surgical Service Line Administrator's establishment of a block time model for the operating room. Now that Monday & Tuesday are the established total joint replacement days these surgeries can be completed early in the week and the patients discharged by Friday. This is important as it would alleviate the need to provide weekend staffing. The NMMC can utilize many of the employees from their already experienced orthopedic/neurology unit without need for additional staff hires. The second is the hospital's reputation for quality and patient centered care as illustrated by their numerous awards to include the Malcolm Baldrige National Quality Award.

The hospital also has four internal weaknesses that need improvement. Staff shortages often result in overflow of patients from other modalities onto closed units. The shortages are primarily in the field of registered nurses. Although there are occasional bed shortages, normally it is a nursing shortage that disables other units from utilizing all their available beds. The nursing shortage is typically offset by pulling nurses from other units onto the short-staffed floors or placing patients onto other units for care by those unit's nurses. Both of these practices pose a weakness to specialized nursing areas by requiring them to take care of a patient that is not within their area of expertise and familiarity. The next weakness is a limited amount of diversely experienced internal managers. This poses a weakness when a position such as Joint Replacement Center clinical coordinator is created.

The third internal weakness was also identified earlier as an issue with supplier power. This is the issue of not having a standardized implant. Although the hospital and the orthopedic surgeons have agreed to limit the number of vendors used, it is still short of a standardization that

may give the hospital increased bargaining power over implant price. The last weakness is the lack of complete data capture devices or procedures in place to capture all the needed data to evaluate all outcomes or true costs associated with the procedure.

The traditional joint replacement center design presents several opportunities for the hospital to improve. These opportunities are all tied to the integration of the wellness approach. The opportunities to this new approach will include increased pre-surgical patient education, improved service delivery process, improved outcomes, improved patient volume, and increased physician recruitment.

The first opportunity is to increase patient understanding of the procedure prior to surgery. The opportunity to better educate the patients will serve as a mechanism to ensure the procedure is the correct treatment choice for them, alleviate much of the fear associated with the unknown and prepare their expectations for recovery as inpatients and post discharge patients. A second opportunity is to improve patient delivery processes. The streamlining and standardization of patient flow, physician orders and supply usage will enable the staff to work more efficiently and decrease costs. Standardization is also key in moving toward a hospital wide standard of care regardless of which surgeon is utilized. This streamlining may enable the facility to better coordinate the pre-surgical appointments, making it more convenient for the patient by providing all their needed visits on one day. The joint replacement committee believes that these actions also have the potential to ultimately increase patient satisfaction.

Likewise, key opportunities exist to improve patient outcomes. The primary outcomes that have been identified by the joint replacement committee to focus on are increased range of motion, decreased length of stay, decreased infection rates, and increased ability to discharge patients to their homes versus the need to transfer them to skilled nursing facilities or rehabilitation facilities. These opportunities may be acquired through service innovations, benchmarking and data analysis. Crucial to this will be in a willingness to evolve the treatments

to best meet the customers' needs. The successful implementation of these innovations may also stimulate growth of the facility's market share. This increase in volume may be stimulated by word of mouth and/or advertising of these new approaches in treatment. Another beneficial result of increased volume will be an increased orthopedic surgeon appeal that may potentially improve future physician recruitment.

The last section of this situational analysis deals with external threats to the hospital. There are several threats that the hospital must acknowledge. The first threat is NMMC losing first mover benefits and being perceived as slow in the adoption of new approaches. Stakeholders may feel the hospital is taking a follower versus leader position in regards to offering the patients the best and most current healthcare practices. This threat may be capitalized on by other hospitals and may even stimulate rivalry in this service area. Another critical threat is that the increased costs associated with the new approach and amenities in conjunction with increasing implant costs could make the procedures unprofitable for the hospital. This threat must be offset by the realization that the hospital must not only remain competitive in amenities offered, but may also use those amenities as a barrier to entry for potential new competitors. The final threat is one that is faced by all of healthcare: the possibility that new advances in the treatment of these patients may drastically change with the new treatment methodology becoming obsolete prior to its return on investment.

Directional Strategies

The current directional strategies of the organization as a whole are as stated in the introduction of this paper appear to be appropriate and sound strategies. However, the mission was perceived as too broad to be utilized for a new joint replacement program. The joint replacement committee established the following as its specific mission: To improve the health and well-being of our patients by providing compassionate, quality care through our comprehensive Joint Replacement Center. Even though this mission statement is more specific it is still nested within the NMMC's mission statement. The vision of the NMMC to be: "The provider of the best patient centered care and health services in America", is also deemed appropriate for the JRC and should be maintained as its vision.

At the beginning of the evaluation of this strategic management plan there were two potential strategies being evaluated. The first is that of business as usual, the other was an improvement approach for the treating total joint replacement patients. The new methodology uses a wellness based approach.

The business as usual option is a continuation of the current practices. These practices are similar to other traditional practices in treating any surgical procedure or medical inpatient stay. According to the NMMC's "Top 20 Variance List of 2006" this traditional approach resulted in a negative profit margin that would likely increase and with the rising costs of implants. Furthermore, if another hospital in reasonably close proximity adopts the new wellness approach, it may be able to capitalize on the first mover benefits and negatively impact the NMMC's market share. A loss in market share may initially minimize the loss associated with the negative revenues produced by the variable costs associated with each case. However, this cost savings would be offset by the programs current fixed costs. This loss in volume may also dramatically affect NMMC's ability to negotiate lower supply prices with the vendors that provide the costly joint implants. The inverse is also true if the facility increased its volume. Another detrimental

effect that the loss of TJR volume will have is that of increased difficulty recruiting new orthopedic physicians to this area. The most important impact involved is the potential for local patients to have to travel to locations outside this region to receive what they perceive as the highest quality in care associated with TJRs.

The improvement option is the second strategy that is being evaluated and recommended. The improvement alternative will consist of the adopting a new methodology for treating total joint replacement patients. This wellness approach to total joint replacement procedures is a unique, innovative way of patient education and treatment. It emphasizes the mindset that a patient going through this procedure is not sick. These patients are merely choosing to have a procedure that will improve their quality of life through increased mobility and decreased pain. The concept focuses on family involvement and group interactions. While an inpatient, all the joint replacement patients will work together, play together and celebrate their accomplishments together, making the experience more pleasant. This initiative will consist of changing and standardizing the processes as they relate to physician referrals, patient education, preadmission testing, admittions into the hospital, the surgical interventions, postoperative patient care, rehabilitation, discharge, and follow up of the patients. It will be necessary to establish quality, cost and access indicators to track and develop the new program.

A literature review reveals that the Anne Arundel Medical Center adopted a similar approach in 1996, based on a program by Dr. John P. Barrett Jr. called "Joint Ventures" (Steele, 2000). This program later grew to be known and referred to as "Joint Camp" (Steele, 2000). The concept consisted of a standardized care plan, patient education piece, utilization of group dynamics, and what the author referred to as "personal touches" (Steele, 2000). The touches that were utilized ranged from the staff's verbal reinforcement to the patient that they were not sick to a hairstylist visit on the day before discharge to wash and style the patient's hair (Steele, 2000). The results of this program were captured by the facility's measurements of their outcomes. In

1999 the programs patient satisfaction ranged from 4.28 to 4.74 on a 5.0 scale with 5 being excellent and 4 meaning very good (Steele, 2000). A study at the facility from 1994 to 1998 also revealed that their volume had doubled during the time frame, average length of stay had decreased by 1.5 days, total cost had decreased by over $1,900 per case and the patient discharges to home had increased by 32% (Steele, 2000).

Adaptive Strategies

The TOWS matrix illustrated below represents the threats, opportunities, weaknesses and strengths of the organization. This framework is useful in the evaluation of the strategic condition of the organization, the conditions it may face in the future, and adaptive strategic alternatives it may utilize to improve. Analysis of the TOWS matrix indicates that there are two beneficial adaptive strategies that NMMC can pursue. Table 5 is the strategic thinking map of adaptive strategic alternatives and expands the focus of each adaptive strategy.

Both the internal and external fix it quadrants of the TOWS matrix show a potential for enhancement. Enhancement can be defined as "seeking to improve operations within present product or service categories through quality programs, increasing flexibility, increasing efficiency, speed of delivery and so on" (Swayne, 2006). The strength of staff culture and the opportunity to improve the patient service delivery process was made apparent in 2006 when the hospital established a multidisciplinary team (the joint replacement committee) that was tasked with performance improvement of the joint replacement process. The team consisted of members from nursing, therapy, pharmacy, administration, outcomes and case management. This diverse group of staff members shared a common goal to improve the total joint replacement program. The use of this group was key in gaining the feeling of joint ownership of this project. Their open-mindedness and determination along with the orthopedic physicians' involvement and support has been this project's greatest strength. Another key strength was that its inpatient unit

was previously an orthopedic and neurology unit and the staff already had experience in treating total joint replacement patients. The team has and continues to endeavor to improve the quality and efficiency of this unit through innovation.

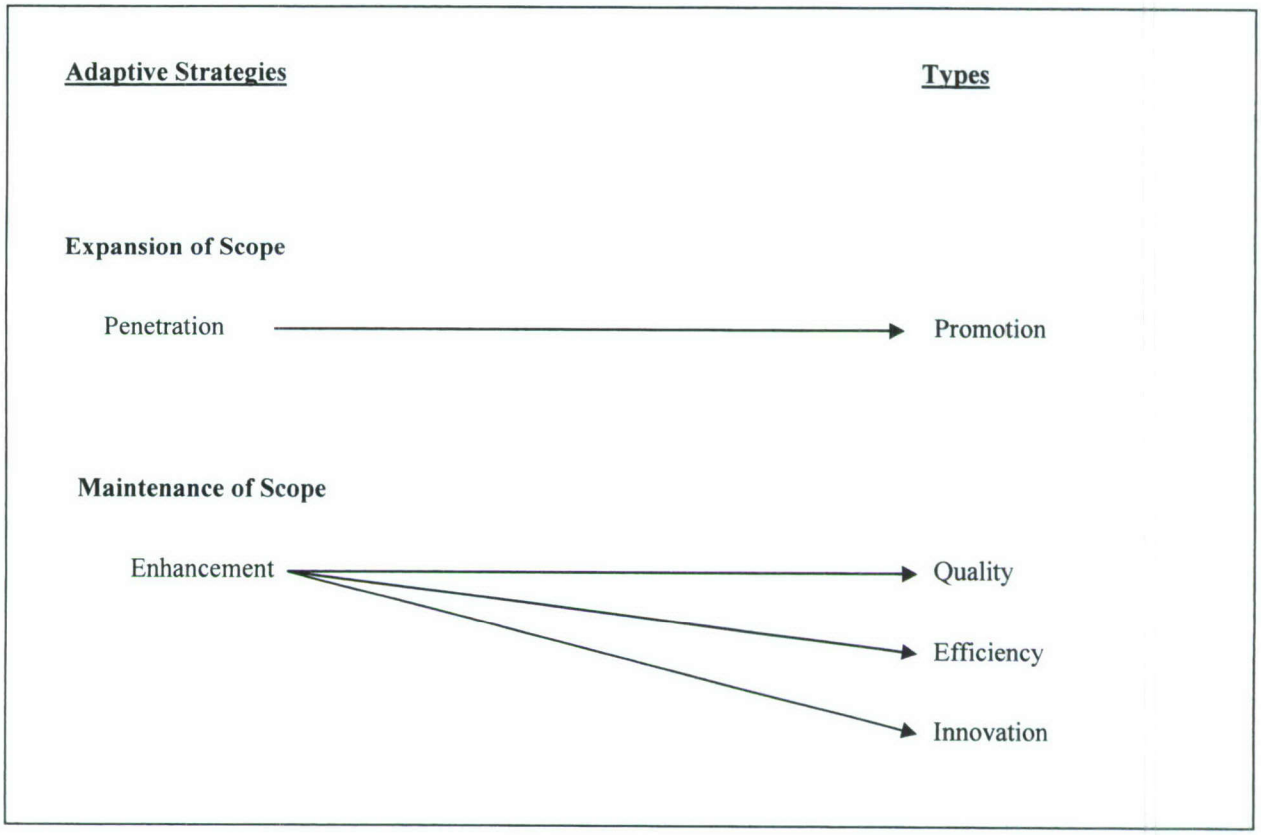
The future quadrant for the TOWS matrix shows the potential for the adaptive strategy of penetration. Penetration is "seeking to increase market share for present products or services in present markets through marketing efforts (promotions, channels or price)" (Swayne, 2006). The strategic thinking map of adaptive strategic alternatives suggests that this can be accomplished through promotion.

Table 4

TOWS Matrix	**Strengths** 1. Staff's culture 2. Facility set up and space capability 3. Surgical block time model 4. NMMC's reputation for quality and patient centered care	**Weaknesses** 1. Staff shortages 2. Difficulty filling the position of clinical coordinator 3. No standardized implant 4. Lack of complete data capture devices or procedures in place
Opportunities 1. Improve patient service delivery process 2. Improve patient outcomes 3. Increase in volume 4. Improve future physician recruitment	**Future**: Penetration	**Internal Fix it Quadrant** Enhancement
Threats 1. Perception that the hospital is taking a follower versus leader position in the best and most current practices. 2. Increased costs result in a negative profit margin 3. Possibility that new advances in the treatment of these patients may drastically change	**External Fix it Quadrant** Enhancement	**Survival Quadrant**

Table 5

Strategic Thinking Map of Adaptive Strategic Alternatives



Market entry strategies

The hospital has already begun a course of internal development, which is defined as "products or services developed internally using the organizations own resources" (Swayne, 2006). This company strategy commenced with the formation of the joint replacement committee in 2006. This strategy is particularly useful to the company because it has superior internal resources and capabilities. The other item of particular interest is the company's lack of competencies consistent with this new service offering. NMMC mitigated this deficit through the use of a consultant with these specific competencies and site visits by the joint replacement committee. The primary advantage to this market entry strategy is the NMMC's ability to maintain control over the program.

Competitive strategies

When utilizing the "Porter Matrix" seen in Table 6 below, it is apparent that the NMMC should utilize a competitive strategy of focus–differentiation. This strategy consists of developing a distinctive service that is focused on a particular market segment. Focus-differentiation is the optimal strategy due to the narrow market focus of total joint replacements and the distinctiveness of the service that will be provided. Additionally, the creation of this unique approach, tailored to achieve the previously established objectives, will likely cause the organization to be unable to pursue a low cost position.

Table 6

Porter's Matrix

		Strategic Advantage	
		Uniqueness Perceived by Customer	**Low-Cost Position**
Strategic Target	**Market Wide (broad)**	Differentiation	Overall Cost Leadership
	Particular Segment Only (narrow)	Differentiation/Focus	Cost/Focus

(Swayne, 2006)

Implementation Strategies

The value chain (Table 7) illustrates the three value adding service delivery strategies relating to competitive advantages, pre-service, point-of-service and post-service. The NMMC currently has two key assets related to pre-service that it needs to maintain. The first is the hospital's reputation for quality that has recently earned it the Malcolm Baldrige Quality Award (2006). The second attribute is its flexible and responsive marketing division. The hospital should utilize this asset to increase its market penetration through advertisements and promotions via the newspaper and television. While maintaining these assets it is also important for the organization to recognize its opportunity to improve in the area of pre-surgical education. This may be accomplished through implementing community seminars, presented jointly by the hospital and physicians, and the distribution of its recently created joint replacement "Patient Guide" to applicable patients at the point of physician referral for surgery. This guide is comprehensive and explains every segment of the patient's treatment from preparation for surgery to post-discharge expectations. This will enhance the patient's capability for preparation and participation in their treatment. A table of content and outline of the "Patient Guide" is included in the appendices.

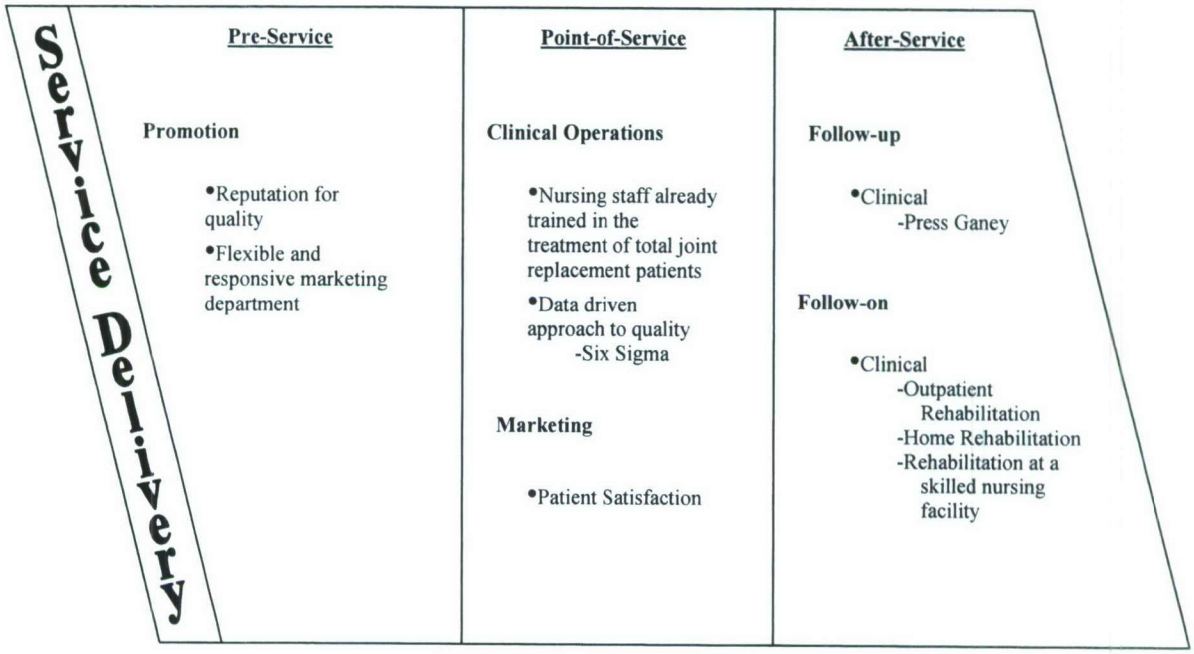
The next strategy in the value chain is point-of-service. This is the section that requires the greatest amount of changes to keep up with the best practices as they relate to joint replacement procedures. The hospital should adopt the wellness approach as discussed earlier in the directional strategies improvement option. The NMMC already has orthopedic specialty trained nurses, which should be a consideration when selecting staff for the future joint replacement program. The facility currently utilizes Six-Sigma for its process improvement and quality control methodology. In the future, the hospital should establish procedures to capture all the outcomes data related to joint replacement procedures for evaluation of the effectiveness of these innovations. The ultimate results of these innovations would be increased range of motion,

decreased length of stay with increased ability to discharge the patient to their home, decreased infection rates and increased overall efficiency. Increased range of motion goal will be accomplished through an increased requirement for discharge. Decreased length of stay and increased ability to discharge the patient to their home may be accomplished by using new techniques such as group therapy. This method of physical rehabilitation and training will increase the patients' amount of daily therapy and training, facilitating their ability to care for them self in a home environment. The physical therapy staff is also trained to recognize patients who need additional individualized care. Decreased infection rates may be achieved through the standardization of best practices for all patients. The standardizations and increased efficiencies will be effective in reducing the costs associated with these procedures.

The last service delivery strategy is post-service delivery. There is a current follow-up process in place to measure patient satisfaction, post-discharge, through Press Ganey. This survey provides the facility with the information to help evolve the joint replacement program to meet the patients' needs. A follow-up phone call procedure should also be implemented two-week post-discharge to thank the patient for selecting the NMMC for their treatment and to ask how we could have improved their experience. This is another tool that will enable the NMMC to fine-tune the new wellness approach. Follow-on care is provided by both the hospital and independent facilities for outpatient, home and even inpatient rehabilitation and physical therapy when needed. The organization should be active in providing the patient with comprehensive information on all their options.

Table 7

The Value Chain for Service in the Treatment of Joint Replacement Patients



The value chain (Table 8) illustrates the three value adding support delivery strategies relating to competitive advantages, organizational culture, organizational structure, and strategic resources. The organizational culture of the hospital can be described as dedicated to patient focused care and open minded in regards to change. This support delivery strategy is particularly important due to the difficulty in cultivating it. The NMMC's culture personifies its Value Statement of "CARES" (compassion, accountability, respect, excellence, and smile). This culture, when practiced, can result in patient satisfaction that serves as a barrier to entry for competition. One difficulty that the staff of this new program will face is that of reinforcing patient independence. In a traditional inpatient setting the staff is focused on making the patient as comfortable as possible, which often includes doing things for the patient that they are capable of doing for themselves. It is critical in the wellness approach to remind the patients that they are

not sick and to encourage them to be as self reliant as possible. By requiring the patients to complete tasks themselves they realize the level of independence that they are capable of and will need after being discharged home.

The current organizational structure for the joint replacement program is a functional and process hybrid as illustrated in Table 9. The majority of the service delivery areas fall under the purview of the Surgical Service Line with a great degree of influence from the independent orthopedic physicians. Although the lines of communication and cooperation between the surgical service line and the rehabilitation service line have been excellent, the induction of the physical therapy staff into the surgical service line would simplify the overall reporting structure of the program. This would also give the joint replacement center coordinator a greater ability to incorporate the team approach to care within the unit.

The NMMC has two distinct strategic resources that it will need to utilize to make this endeavor successful. The first resource is the modern, well-maintained facility that has sufficient space to allow the creation of a differentiated Joint Replacement Center (JRC) through renovations of the current Orthopedic and Neurology floor. This separation and differentiation is felt to be crucial by the joint replacement committee and would not be possible without the full support of the hospital executive administration. The differentiation of this unit would assist the patients in understanding that they are not sick patients in a typical hospital environment. The other resource is the hospital's sufficient quantity of trained orthopedic nursing staff. The NMMC should staff this unit by transferring the needed orthopedic nurses from the orthopedic and neurologic ward that will also shift workload to the new unit. This will provide the new unit with well trained and experienced nurses and maintain the appropriate staffing level in the other units for their newly adjusted workload. The main concern regarding staffing is that of selection of a JRC Clinical Coordinator. The NMMC must select an individual that is experienced in the new wellness approach to joint replacement surgery and already has a good working relationship

with all the internal stakeholders. This may not be possible due to the position previously not existing within the NMMC and there is no staff member with this experience from previous employment. This weakness may be minimized by using an interim JRC clinical coordinator that is either familiar with all the internal stakeholders or through the external recruitment of an individual experienced in this approach who has a good cultural fit to the facility.

Table 8

The Value Chain for Support of Joint Replacement Patients

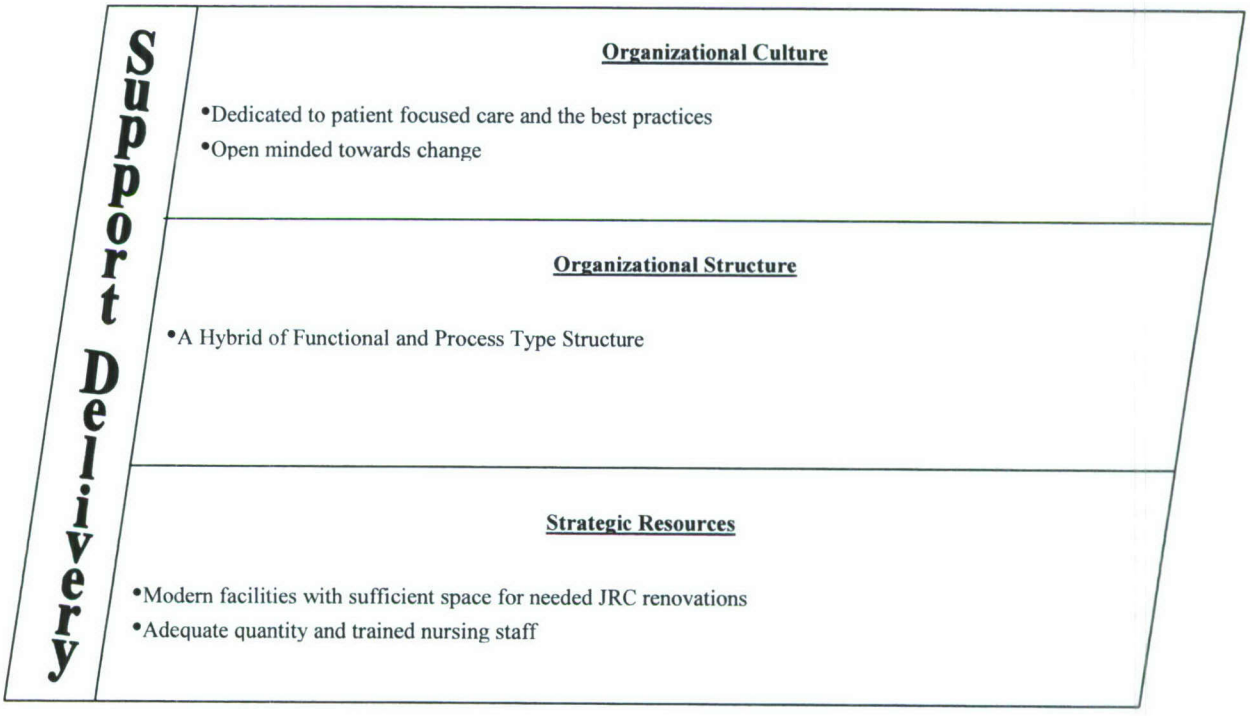
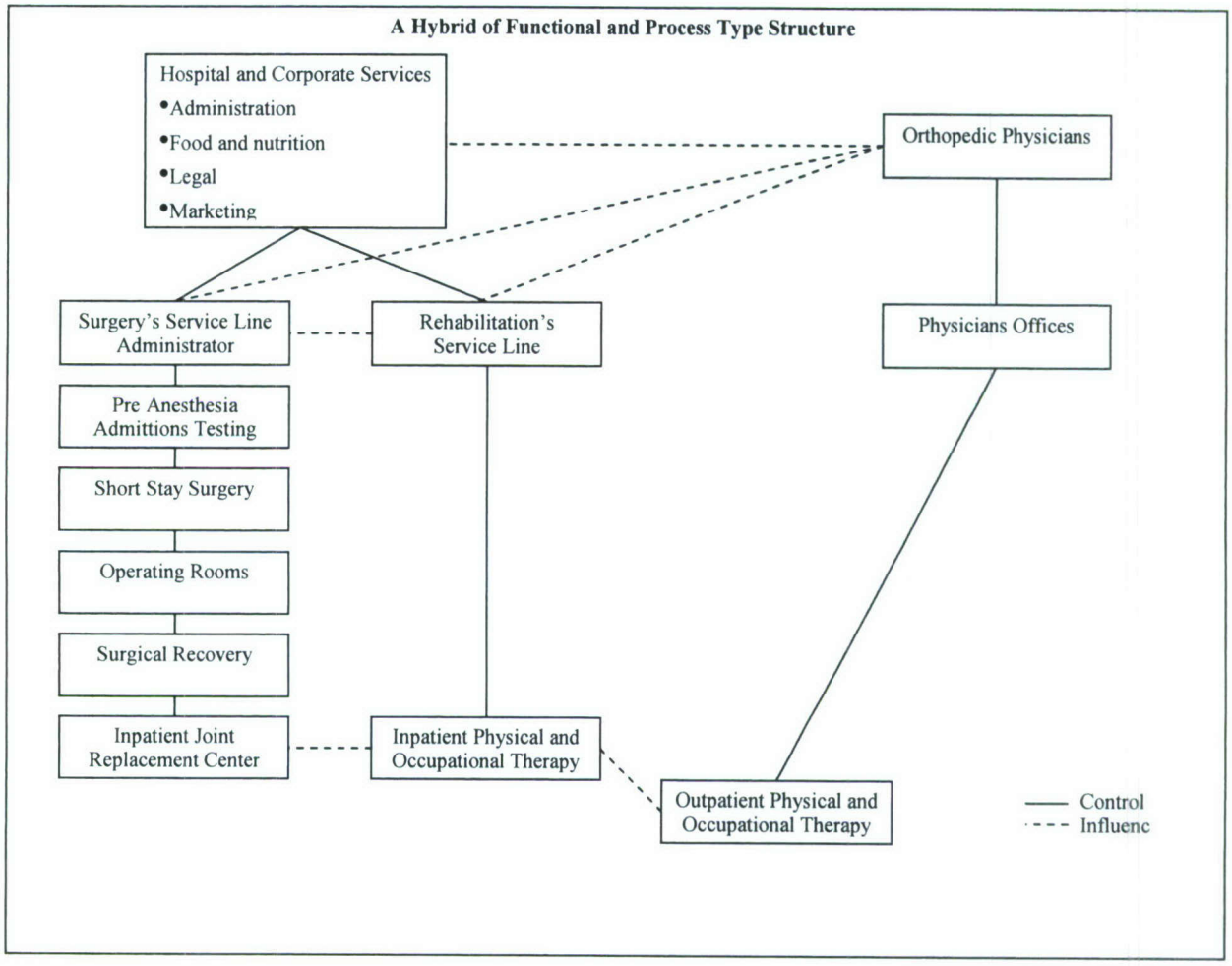


Table 9


A Hybrid of Functional and Process Type Structure
Hospital and Corporate Services
•Administration
•Food and nutrition
•Legal
•Marketing
Orthopedic Physicians
Surgery's Service Line Administrator
Rehabilitation's Service Line
Physicians Offices
Pre Anesthesia Admittions Testing
Short Stay Surgery
Operating Rooms
Surgical Recovery
Inpatient Joint Replacement Center
Inpatient Physical and Occupational Therapy
Outpatient Physical and Occupational Therapy
Control
Influenc

The strategic thinking map (Table 10) illustrates the recommended strategy formation. The strategies listed require many steps to reach the ultimate objectives. This may be accomplished through a unit action plan. The action plan is divided into 7 sections: facility design, patient education, amenities, staff selection, process standardization, data collection, and marketing.

Table 10

Strategic Thinking Map of Strategy Formulation

Directional Strategies	Adaptive Strategies	Market Entry Strategies	Competitive Strategies	Implementation Strategies
Mission	**Expansion of scope**	**Development**	**Positioning**	**Service Delivery**
Vision	Penetration	Internal Development	Focus-Differentiation	Pre-service
Value	**Maintenance of scope**			Point of service
Goals	Enhancement			After service
				Support
				Culture
				Structure
				Strategic Resources
				Unit Action Plan
				Objectives
				Actions

The facilities design aspect of this strategy involves determining a designated area for the new Joint Replacement Center and creating a visual separation and differentiation from the rest of the hospital. One wing of the current Orthopedic/Neurology floor would be an ideal location. The separation and differentiation could be accomplished by placing cosmetic doors as a

physical divider when entering the unit. These doors should create an entrance that is easily recognizable and associated with joint replacements and the wellness approach. NMMC should paint the unit's hallways and the footers of each patient's rooms this will help create a light non-institutional type atmosphere. The artwork in the patients' rooms should be replaced due to fading. The facility should also have artwork created for the hall that will incorporate the concept of "Cruising down the Mississippi, River Walk" that will be used by physical therapy as a process to promote their gait training evaluations, activities, and patient ambulation. The NMMC should also renovate the group therapy room, which will also be used as a group dining area during the patients' celebratory meal. The required renovations include: removing the rooms current folding divider, removing the carpet and repainting the room. Making a display with photos of the staff and physicians and placing it at the entrance of the unit may also help the patients identify with their treatment team. These are just a few steps that should be taken to help create a wellness environment that serves as a positive reinforcement to the patients and staff.

The next segment of the action plan addresses the several key factors to the implementation of a successful patient pre-surgical education piece. The process should begin by creating a comprehensive patient education guide. An illustration of the table of contents needed is shown in Table 11 below. There is also an outline of the needed information contained in Appendix C. In addition to the patient guide, a pre-surgical class would also be a useful clarification and reinforcement tool for the patients. To maximize the effectiveness of this approach this class should be held a couple of weeks prior to surgery and made mandatory for all patients. If possible this class should be held weekly in close proximity to the Joint Replacement Center to facilitate a tour after the class for interested patients. This will help to further clarify the processes involved in the patient's treatment and will hopefully eliminate some of their anxiety regarding the procedure. The patients should be presented with the patient guide by the physicians' office at the point of referral for surgery. The physicians office will set up the

patients education class at the same time it sets up the surgery, which will allow the patient time to review the information prior to their pre-surgical education class. The Clinical coordinator, with the assistance of a joint replacement physical therapy technologist, should perform this class and be able to answer any questions that arise. Equipping the room with a large video projector or television would add considerable value by allowing the use of slide presentations in conjunction with this lecture. Once the educational seminar schedule is established it is important to make the various internal stakeholders aware of its time and location to minimize confusion. This may be done through internal newsletters, email, service specialty section meetings and executive level management meeting.

While the pre-surgical education piece is being completed the unit's choice of amenities must also be decided. The three site visits in conjunction with discussions with the facilities joint center consultant illustrated that there are numerous amenities that can be incorporated into a joint replacement center and their success relies with the perception and satisfaction of the patient. Individuals from various backgrounds may place considerably different value on each of these amenities. The key to success will be in allowing the joint replacement centers amenities to evolve based on the patient satisfactions with each. The initial set of amenities offered will include:

- Group physical therapy,
- The surgeons sending each patient a flower after surgery,
- A daily news letter to tell the patients what they may expect for the day,
- Coach Program: with a family member or friend assisting in the recovery process,
- A gourmet meal with fellow patients and coaches to celebrate completion of their inpatient goals on the evening prior to transitioning home,
- Beautician services the day prior to transitioning home.

Table 11

Table of Contents for the Patient's Guide to Total Joint Replacement

The staff selection for this unit will also be important in maintaining the culture that is desired for the joint replacement center. One of the first tasks is to identify physician champions to support the program as it develops. Establishing a Medical Director position will also get buy-in from the physician groups and give an increased sense of legitimacy to the program. The recruitment for the clinical coordinator position will be essential in the continued success of this service line. When interviewing for the nursing and physical therapy staff, it will be beneficial to first create a standardized tool to assure the fairness and the comprehensiveness of the interviews. Once the unit's staff is identified every effort must be made to clearly articulate their expected behaviors, roles and responsibilities. Staff trainings should also include the physical

therapy staff even though they report through a different service line. This is important for continuity of care. An initial staff training should be conducted prior to the launch of the new joint replacement center, and each member of the staff should be required to go to at least one patient pre-surgical education session (within their first four months of work) to assure that they are providing the same treatment and care that the patients are being told to expect. The new unit should also purchase a specific color scrubs to add a sense of team cohesion and help identify the JRC staff members for the patient and their families.

Process standardization will be crucial in the facility's ability to increase efficiency and achieve improved outcomes. The first step is to work with the physicians to develop standardized order sets to increase the continuity of the services being provided. This order set will include standing orders for medications, dressing changes, physical therapy and diet.

Discussions in the joint replacement committee made obvious the complications associated with a patient not having certain durable medical equipment (DME) while inpatients at the hospital. DME are items such as a walker and/or hip kit that is prescribed by the physician and typically picked up by the patients (at an independent vendor) and brought to the hospital for training and use during their inpatient stay. The committee discussed the possibility of the hospital buying this equipment for the patients, but discovered it was not an option due to legal restrictions. However, the hospital should buy and maintain this equipment for patient training while in the hospital. This will alleviate any legal concerns and assure that the patients are properly trained on this equipment incase they chose to purchase and utilize it after being released from the hospital.

There are several other pieces of equipment that the hospital needs to purchase prior to initiating this program. The unit needs to purchase rockers and ottomans for the knee replacement patients to encourage them to sit up, stay out of bed and bend their knee. The

celebratory meal that is planned for the patients will require the purchase of six tables and twenty-four chairs.

A flag system should be purchased to place outside of each patient's room. There are five color coded flags on each sign that can be shifted outward to help communicate where the patient currently is within their treatment process. This will increase the staff's ability to communicate and reduce the potential for the patient to not receive care in a timely manner. In addition to increasing staff to staff communications the unit also needs to establish a procedure to communicate to the patient where they are in the process and what to expect each day. There are two methods that should be utilized to achieve this. The first is the creation of daily news letters that can be given to the patients at breakfast. These news letters will explain what will happen regarding their treatment for that day and give them encouragement in completing their goals. The next method is the use of dry erase boards in each patient room. These boards are currently used for telling the patient the name of the staff member who cares for them but could easily be used to also express to the patients what their personally tailored physical therapy goals are for the day.

The physical therapy department at the hospital has begun to develop a program that will utilize group therapy. This will help to increase the amount of physical therapy each patient receives daily. This increased activity speeds up the recovery process and will better prepare them to be self sufficient by discharge. The physical therapy in conjunction with the joint replacement center is also working on a theme of a river-walk to be utilized in their physical therapy evaluations, gait training, daily activities and patient ambulation during their inpatient stay. This theme consists of several cities that are located along the Mississippi river. Each city is represented by artwork representing that city and strategically placed at a distance matching one of the daily ambulation goals. When a patient walks to each of the cities they conduct an activity

associated with that city and that is also something that they will have to do for themselves after they are discharged home.

As discussed earlier the joint replacement center's goals focus on improvement of outcomes, increased efficiency and decreased costs. In order to achieve these goals it is important for the facility to be able to track its results in these areas. The JRC coordinator should work with the management information systems (MIS) to identify what data can be captured from the information systems, determine how to capture the data that is currently not available, and establish a point of contact to harvest and analyze the data. The joint replacement center should also establish a process to capture data from: post educational session surveys, discharge surveys for both the patients and their coaches and surveys from a follow-up call from the JRC Clinical coordinator. This information is extremely important in its ability to identify the areas for improvement to help evolve this new service.

The marketing of this program will be vital to the facility's endeavors to increase its volume. This can be accomplished through mechanisms that will increase awareness of this service. The primary source of advertising should be presentations through community seminars. These seminars should be developed and conducted as a joint effort between the physicians and the hospital. They should be conducted during health fairs, other community education sessions or as independent seminars. The seminars should be held in multiple locations to enable people from all the NMMC's service areas have an opportunity to attend. These community seminars should be held bimonthly for the first six months that the program is offered and then reevaluate the frequency needed based on attendance. It will also be beneficial to have all the physician's biographies and photos available at the seminars for patients to take with them. The seminar should focus on the causes associated with total joint replacement procedures, alternatives to the procedure, what is involved in the procedure and recovery and how the hospitals service is differentiated from tradition treatment. These seminars should be widely publicized in print ads,

newsletters, radio, television and on the hospital's webpage to promote attendance. The services offered should also have general advertisements using the same medias as above. The advertising, community seminars, patient pre-surgical education piece and daily newsletters should all have a similar style or look to help facilitate branding of the service.

Appendix A

County	Median Household Income		Service Area Population Estimates		Population Adjusted Income by County	
	2005	2010	2005	2010	2005	2010
ALCORN, MS	$34,147	$38,219	34869	35438	$1,190,671,743	$1,354,404,922
BENTON, MS	$26,682	$29,626	6755	6375	$180,236,910	$188,865,750
CALHOUN, MS	$31,607	$35,116	14693	14383	$464,401,651	$505,073,428
CHICKASAW, MS	$30,796	$33,430	20692	20399	$637,230,832	$681,938,570
CHOCTAW, MS	$32,331	$36,250	8420	8298	$272,227,020	$300,802,500
CLAY, MS	$32,308	$35,395	21688	21141	$700,695,904	$748,285,695
COLBERT, AL	$33,038	$35,668	52561	51956	$1,736,510,318	$1,853,166,608
FRANKLIN, AL	$30,588	$34,219	33200	32667	$1,015,521,600	$1,117,832,073
ITAWAMBA, MS	$35,083	$39,180	22166	22436	$777,649,778	$879,042,480
LAFAYETTE, MS	$38,906	$43,594	38783	40966	$1,508,891,398	$1,785,871,804
LAMAR, AL	$30,370	$33,209	15949	14904	$484,371,130	$494,946,936
LEE, MS	$38,436	$42,194	77101	79963	$2,963,454,036	$3,373,958,822
LOWNDES, MS	$39,505	$43,876	61267	60025	$2,420,352,835	$2,633,656,900
MARION, AL	$30,540	$33,299	27610	26626	$843,209,400	$886,619,174
MARSHALL, MS	$36,185	$41,993	39049	40312	$1,412,988,065	$1,692,821,816
MONROE, MS	$34,978	$38,251	39774	39517	$1,391,214,972	$1,511,564,767
OKTIBBEHA, MS	$28,830	$32,323	42985	42620	$1,239,257,550	$1,377,606,260
PONTOTOC, MS	$37,492	$41,920	24694	26056	$925,827,448	$1,092,267,520
PRENTISS, MS	$33,385	$37,451	27590	27876	$921,092,150	$1,043,984,076
TIPPAH, MS	$35,788	$39,639	22797	22888	$815,859,036	$907,257,432
TISHOMINGO, MS	$32,857	$37,250	18503	18294	$607,953,071	$681,451,500
UNION, MS	$36,125	$39,320	24266	25259	$876,609,250	$993,183,880
WEBSTER, MS	$29,403	$32,897	10484	10270	$308,261,052	$337,852,190
YALOBUSHA, MS	$28,463	$31,316	15575	16060	$443,311,225	$502,934,960
Total Sum			701,471	704,729	$24,137,798,374	$26,945,390,063
Total Averages	$33,243	$36,901	29,228	29,364	$34,410	$38,235
• Median income and populations 2005-2010 per: Solucient (MPP)						

Appendix B

	Health Grades score 2007 Ratings	Total Knee	Total Hip	Combined Score	Beds	Total Joint Replacement Volume
A	North Mississippi Medical Center (Tupelo , MS)	3	3	3	650	574
B	Baptist Memorial Hospital (Memphis , TN)	3	3	3	706	not available
C	Methodist Healthcare Memphis Hospitals (Memphis , TN)	5	5	5	1537	not available
D	Baptist Memorial Hospital Golden-Triangle (Columbus , MS)	5	3	4	328	262
E	Baptist Memorial Hospital North Mississippi (Oxford, MS)	5	3	4	217	119
F	Magnolia Regional Health Center (Corinth, MS)	3	5	4	164	not available

http://www.healthgrades.com
http://www.nmhs.net/tupelo/
http://www.baptistonline.org/facilities/memphis/
http://www.ucomparehealthcare.com/hospital/Tennessee/Methodist_Healthcare_Memphis_Hospitals.html
http://www.baptistonline.org/facilities/goldentriangle/
http://www.baptistonline.org/facilities/oxford/
http://www.ucomparehealthcare.com/hospital/Mississippi/Magnolia_Regional_Health_Center.html

Appendix C

Outline for the Patient's Guide to Total Joint Replacement

About the Joint Replacement Center
Meet Your Health Care Team
Understanding Your Surgery
- Causes of Serious Hip and Knee Problems
- What is Total Knee Replacement Surgery
- What is Total Hip Replacement Surgery
- Risks of Joint Replacement Surgery
- What Results Can You Expect from a Joint Replacement

Preparing for Surgery
- Blood Donation
- Physical Exam by Medical Doctor or Health Practitioner if directed by Surgeon
- Dental Exam if you have not had one in the past year
- Designation of your Coach
- Pre-Anesthesia Admissions Testing (PAAT)
- Pre-operative Classes
  - Class Preparations
  - Exercise
- Diet and Nutrition
  - Healthy Eating
  - Iron and Vitamin Supplements
- Medications Before Surgery
- Preventing Infections
- Discharge Planning
- Outpatient Therapy Services
- Home Health Services
- Rehabilitation Facilities
- Equipment Needed for Home
- Transportation Needs
- Making Your Home a Safe Environment
- Meal Planning
- What to Pack for the Joint Replacement Center

Your Surgery
- Day of Surgery
  - Leaving for the Joint Replacement Center
  - Reporting to the Hospital
- Before Surgery
  - Pre-operative Preparation Area (Short Stay Holding)
  - Surgical Waiting Room
  - Anesthesia
- Your Surgery
  - Going Into Surgery
- The Recovery Area

Appendix C (continued)

Outline for the Patient's Guide to Total Joint Replacement

Joint Replacement Center Stay
- Post-Surgical Care
- Pain Medications and Pain Control
- Hospital Recovery Checklist
- Group Exercises and Activities
- Diet
- Discharge Goals

Discharge Plan
- To be discharged home with outpatient rehabilitation
- To be discharged home with or in-home rehabilitation
- To be discharged to a rehabilitation unit

Recovering at Home
- Medications
- Precautions
- Special Equipment
- Diet and Exercise
- Allowed Activities
- Post-Surgery Follow-up

Living with Your Joint Replacement
- Lifetime Activities
- Recommended
- Not Recommended
- Avoid Entirely
- Medical Follow-up and Dental Care
- Metal Detectors

Hip Exercises

Hip Log

Knee Exercises

Knee Log

Commonly Asked Questions

Common Complaints After Joint Replacement Surgery

Key Telephone Numbers

Maps & Directions
- Hospital Directions
- Entrance and Parking Directions
- Blood Services Map

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